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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

OLSEN, ALLAN W

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/730,783

Applicant(s)

OH ET AL.

Examiner

Allan Olsen

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) 10 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claim 10 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant has again restated their traversal of the restriction requirement. Applicant timely traversed the restriction requirement in the reply filed on October 14, 2004. The examiner responded to applicant's traversal of the restriction in the Advisory action of November 8, 2004. However, until now, it has never been expressly stated that the requirement is still deemed proper and is therefore made FINAL.

This application contains claim 10, which is drawn to an invention nonelected with traverse in the reply filed October 14, 2004. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Response to Arguments

Applicant's arguments, filed June 12, 2006, with respect to the rejection of claims 1, 3 and 6-9 as being unpatentable over JP 61-231181 in view of JP-02-149683 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is presented below.

Applicant's arguments filed June 12, 2006 regarding the rejection of claims 1, 2 and 6-9 under 35 U.S.C. 103(a) as being unpatentable over JP 10-193024 in view of

Art Unit: 1763

JP-02-149683 and of claims 4 and 5 as being unpatentable over JP 10-193024 and JP-02-149683, as applied to claim 9, and further in view of US Patent 5,747,931 issued to Riddle et al., have been fully considered but they are not persuasive.

Applicant argues, in part:

Firstly, JP '204 only discloses that the surface of roll 102 is marked up to the prescribed depth, and only uses an etching liquid, showing no need for going to the trouble and expense of ultrasonic etching, and no need to produce grooves in the punch at a desired depth, thickness and sidewall inclination angle, as recited.

In response, the examiner acknowledges that JP'024 does not teach ultrasonic etching. As such, JP'024 is not expected to show the need for ultrasonic etching. Furthermore, the rejection's stated reason to add ultrasound to the process of JP'024 was **not to achieve a desired etching depth**, as implied by applicant's arguments, but rather to improve the uniformity in the etching process.

Applicant also argues:

Secondly, JP '683 uses a single ultrasonic generator located at the bottom of a tank to obtain a precise depth. Applicants respectfully submit that one of ordinary skill in the art would not be motivated to use an ultrasonic etching device to obtain a precise groove depth in JP '024 because JP '024 already discloses achieving this with just an etching liquid.

Art Unit: 1763

In response, the examiner find nothing in the English language abstract to indicate that JP'024 achieves precision in the depths of etched grooves. Also, this argument pertains to a newly added limitation that is addressed in the following final rejection.

Applicant also argues:

Thirdly, neither reference discloses producing grooves in a roll punch at a desired depth, thickness and sidewall inclination angle, as recited.

This pertains to the same issue applicant raised with respect to claims 4 and 5, about which applicant argues:

Furthermore, the Office Action improperly fails to address the positively recited features of the roll punch made by the claimed method, as recited in detail in claims 4 and 5. In this regard, Applicants respectfully submit that all words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

None of the applied references discloses or suggests the positively recited features in claims 4 and 5.

The examiner disagrees. Claims 4 and 5 address the verticality of the partition sidewalls. The limitations of claims 4 and 5 are met by a structure having a vertical sidewall (i.e., perpendicular to the surface). The rejection stated, in part, "it would be obvious for one skilled in the art to make the roll punch with vertical side wall if the roll punch is to be used to form partition walls of a plasma display panel because Riddle

Art Unit: 1763

teaches that vertical sidewalls are desirable for roll punches when they are to be used to form plasma display panels". As such, and contrary to applicant's assertion, the references do suggest the positively recited features of claims 4 and 5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2 and 6-9 are rejected are under 35 U.S.C. 103(a) as being unpatentable over JP 10-193024 in view of JP-02-149683.

JP 10-193024 discloses a method of forming a grooved cylindrical core comprising: providing a resin layer 104 on an external surface of roll 102; irradiating laser beam 112 on the resin layer to expose the underlying roll; etching the exposed metal portions of the roll.

JP 10-193024 does note teach etching using ultrasonic waves.

JP 02-149683 discloses using ultrasonic wave etching to provide etched grooves having uniform depth.

Art Unit: 1763

It would have been obvious to one skilled in the art to incorporate ultrasonic etching of JP'683 in to the process of JP'024 in order to improve the uniformity of depth in all of the grooves in the etched cylindrical substrate.

Regarding the placement of and number ultrasound vibrating units, it is noted that apparatus limitations, unless they affect the process in a manipulative sense, may have little weight in process claims.¹ The duplication² and rearrangement³ of parts have been held to be obvious. Applicant has presented no argument which indicates the claimed configuration of the ultrasound vibrators is significant or that it is anything more than one of numerous possible configurations that a person of ordinary skill in the art would find obvious for the purpose etching. However, if the claimed process yields an **unexpected** product or result, the process may be patentable⁴ - but, the burden is on applicants to show the unexpected result.⁵

With respect to the intended use limitations recited in the claims, it is noted that what the roll punch is used for later, is not considered to limit the claims. While intended use recitations and other types of functional language cannot be entirely

¹ In re Tarczy-Hornoch 158 USPQ 141, 150 (CCPA 1968); In re Edwards 128 USPQ 387 (CCPA 1961); Stalego v. Heymes 120 USPQ 473, 478 (CCPA 1959); Ex parte Hart 117 USPQ 193 (PO BdPatApp 1957); In re Freeman 44 USPQ 116 (CCPA 1940); In re Sweeney 72 USPQ 501 (CCPA 1947).

² St. Regis Paper Co. v. Beemis Co. Inc. 193 USPQ 8, 11 (1977); In re Harza 124 USPQ 378 (CCPA 1960).

³ In re Japikse 86 USPQ 70 (CCPA 1950)

⁴ In re Margolis 228 USPQ 940 (Fed. Cir. 1986); In re Kirsch 182 USPQ 286 (CCPA 1974); In re Suether 181 USPQ 36 (CCPA 1974); In re Costello 178 USPQ 290 (CCPA 1973); In re Von Schickh 150 USPQ 300 (CCPA 1966); In re Sussman 60 USPQ 538 (CCPA 1944); In re Kaplan 45 USPQ 175 (CCPA 1940).

Art Unit: 1763

disregarded, in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claims. In a claim drawn to process of making, the intended use must result in a manipulative difference as compared to the prior art.⁶

Claims 4, 5 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-193024 and JP 02-149683 as applied to claim 9 above, in view of US Patent 5,747,931 issued to Riddle et al.

JP 10-193024 and JP 02-149683 do not teach forming a roll punch with an intended use of forming partition walls of a plasma display panel. As, such they do not teach forming a roll punch having vertical sidewalls.

Riddle teaches using a roll punch with the intended use of forming partition walls for a plasma display panel and Riddle teaches forming vertical sidewalls (column 5, line 62).

When making a roll punch according to the combined teachings of JP 10-193024 and JP 02-149683, it would be obvious for one skilled in the art to make the roll punch with vertical side wall if the roll punch is to be used to form partition walls of a plasma

⁵ In re Thorpe 227 USPQ 964 (Fed. Cir. 1985); In re Best 195 USPQ 430 (CCPA 1977); In re Fessman 180 USPQ 324 (CCPA 1974); In re Brown 173 USPQ 685 (CCPA 1972); Ex parte Gray 10 USPQ 2d 1922, 1925 (BPAI 1989).

⁶ In Re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 3122 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963).

Art Unit: 1763

display panel because Riddle teaches that vertical sidewalls are desirable for roll punches when they are to be used to form plasma display panels.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Claim 1 now recites each of the following limitations for which the examiner finds no support in the specification.

partially removing the mask from said forming roll at regularly spaced positions while rotating said forming roll, to properly adjust the intervals between the mask-free parts,

and

positioning at least one ultrasonic vibrator in the etching tank at a side other than the top or bottom of the immersion tank,

Art Unit: 1763

Regarding "to properly adjust the intervals between the mask-free parts", this limitation attributes the proper adjustment of the interval between mask free parts to the process of "partially removing the mask from said forming roll at regularly spaced intervals while rotating said forming roll." The examiner notes the following excerpt from page 10 of the specification.

In addition, it is possible to produce a desired highly precise roll punch by properly adjusting the intervals between the mask-free parts of the forming roll.

This passage, however, does not attribute the interval adjustment to "partially removing the mask from said forming roll at regularly spaced intervals while rotating said forming roll."

Regarding the placement of the ultrasonic vibrator, the examiner finds no support for "at a side other than the top or bottom of the immersion tank".

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

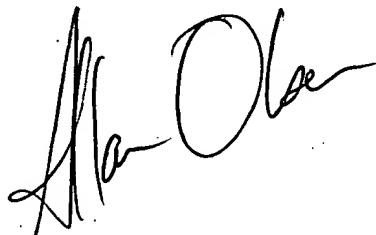
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 1763

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. The examiner can normally be reached on M, W and F: 1-5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Allan Olsen', is written over a horizontal line.

Allan Olsen
Primary Examiner
Art Unit 1763